



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,785	03/21/2006	Jochen Wehner	WEHNER-2 PCT	9559
25880 7590 04/09/2009 COLLARD & ROE, P.C. 1077 NORTHERN BOULEVARD ROSLYN, NY 11576				
EXAMINER				
MCULLEY, MEGAN CASSANDRA				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
04/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/572,785

**Applicant(s)**

WEHNER, JOCHEN

**Examiner**

Megan McCulley

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SG/US)  
Paper No(s)/Mail Date 1/29/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2, 3, and 5-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (U.S. Pat. 6,046,297) in view of Sondhe et al. (U.S. Pat. 5,340,652).

Regarding claims 12, 15, 17 and 18: Rosenberg et al. teaches mixing a polyol component comprising a low molecular weight polyol (col. 4 lines 32-39), such as tetraethylene glycol (col. 4 line 37), which has a calculated molecular weight of 194 g/mol and a calculated hydroxyl group concentration of 10.3 mol OH/kg polyol., which fall within the claimed ranges, a high molecular weight polyol (col. 3 lines 60-67) of the general formula  $\text{HO}(\text{RO})_n\text{H}$  wherein R is an alkylene radical (col. 4 lines 1-9). This formula shows there are 2 hydroxyl groups, and with the molecular weight given to be 500-3000 (col. 3 line 63), the calculated hydroxyl group concentration is 0.67-4 mol OH/kg polyol, which overlap the claimed ranges. Further, a diisocyanate (col. 3 line 38) is mixed, which is a polyisocyanate. Rosenberg et al. further teaches adding 4,4'-methylene-bis-(3-chloro-2,6-diethylaniline) (MCDEA) (col. 1 line 64 and col. 5 line 63), which is a light resistant aromatic amine. At least partial curing is taught (col. 6 line 5).

Rosenberg et al. does not teach bringing the mixture into contact with a synthetic resin no cured or not completely cured. However, Sondhe et al. teaches mixing (col. 13 line 31) a composition comprising an aromatic amine (col. 3 line 3), and a polyol component and a polyisocyanate component (abstract). Sondhe et al. also teaches that upon mixing, the urethane system will immediately commence reaction (col. 13 lines 33-35), therefore it is at least partially cured. Also disclosed is application to an epoxy, which is not fully cured (col. 3 lines 59-62). Sondhe et al. and Rosenberg et al. are analogous art because they are both concerned with the same field of endeavor, namely polyurethane compositions cured with aromatic amines. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the composition of Rosenberg et al. with the process of Sondhe et al. and would have been motivated to do so for such desirable properties as longer pour life, reduced tendency to crack, and reduced presence of toxic free toluene diisocyanate monomers, as evidenced by Rosenberg et al. (col. 1 lines 14-16).

The process of the above combination would implicitly yield a synthetic resin composite material.

Regarding claim 2: While Rosenberg et al. does not directly teach that the gel coat at 23°C displays an elongation at break (measured as per DIN EN ISO 527) of at least 3%, since all of the components are present in the composition it is inherent that the composition would have these properties. If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the Office's position that the application contains

inadequate disclosure that there is no teaching as to how to obtain a composition with these properties.

Regarding claim 3: Rosenberg et al. does not teach the polyurethane gel coat is not completely cured. However, at the time of the invention a person having ordinary skill in the art would have found it obvious to not completely cure the polyurethane gel coat based on the teaching of Sondhe et al. and would have been motivated to do so since this would allow the urethane to bleed and intermingle with the epoxy in order to form chemically fused layers, as evidenced by Sondhe et al. (col. 3 lines 57-68).

Regarding claims 5, 6, 7, and 8: Rosenberg et al. teaches 4,4'-methylene-bis-(3-chloro-2,6-diethylaniline) (MCDEA) (col. 1 line 64 and col. 5 line 63), which is a 4,4'-methylenebis (2,6-dialkyl-aniline). As evidenced by paragraphs 60-63 of the Pre-Grant Publication of the instant application, this particular aromatic amine when subjected to the limitations found in claims 5 and 6 of the instant application inherently gives the desired gel time and color shade change. If it is applicants' position that this would not be the case: (1) evidence would need to be presented to support applicants' position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain a composition with these properties.

Regarding claim 9: Rosenberg et al. teaches the basic claimed composition as set forth above. Not disclosed is the amount of the aromatic amine in the polyol component. However, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in

the absence of unexpected results. See *In re Aller*, 105 USPQ 233 and MPEP 2144.05. At the time of the invention a person having ordinary skill in the art would have found it obvious to optimize the amount of the aromatic amine and would have been motivated to do so for such desirable properties as completely reacted TDI monomers, as evidenced by Rosenberg et al. (col. 2 lines 8-14) since they are toxic. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. See *In re Boesch and Slaney*, 205 USPQ 215.

Regarding claims 10 and 11: Rosenberg et al. teaches the basic claimed composition as set forth above. Not disclosed is the amount of the low molecular weight polyol. However, this is a result effective variable that can be optimized. At the time of the invention a person having ordinary skill in the art would have found it obvious to optimize the amount of the low molecular weight polyol and would have been motivated to do so for such desirable properties as sufficient chain extending of the prepolymer to form a polyurethane elastomer to form an easily applicable polyurethane elastomer with the desired viscosity.

Regarding claim 13: Rosenberg et al. teaches a low molecular weight polyol which is tetraethylene glycol (col. 4 line 37), which is a polyether polyol.

Regarding claim 14: Rosenberg et al. teaches the high molecular weight polyol can be a polyether polyol or a polyester polyol (col. 3 lines 60-61)

Regarding claim 16: Rosenberg et al. teaches the basic claimed composition as set forth above. Not disclosed is the amount of the high molecular weight polyol.

However, this is a result effective variable that can be optimized. At the time of the invention a person having ordinary skill in the art would have found it obvious to optimize the amount of the high molecular weight polyol and would have been motivated to do so for such desirable properties as sufficient strength in the cured product.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (U.S. Pat. 6,046,297) in view of Sondhe et al. (U.S. Pat. 5,340,652) as applied to claim 17 and in further view of Motsinger et al. (U.S. Pat. 3,217,536).

Regarding claim 4: Rosenberg et al. teaches the basic process as set forth above. Not disclosed is the synthetic resin is a reinforced contains reinforcing materials. However, Motsinger et al. teaches a polyurethane coating on an epoxy resin laminated with fiberglass (col. 3 line 66-col. 4 line 1). Rosenberg et al. and Motsinger et al. are analogous art because they are both concerned with the same field of endeavor, namely products coated with epoxy resins and polyurethanes. At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the fiberglass laminated epoxy of Motsinger et al. with the composition of Rosenberg et al. and would have been motivated to do so for such desirable properties as to provide strength and weather protection, as evidenced by Motsinger et al. (col. 4 lines 1-14).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberg et al. (U.S. Pat. 6,046,297) in view of Sondhe et al. (U.S. Pat. 5,340,652) as applied to claim 18 and in further view of Motsinger et al. (U.S. Pat. 3,217,536).

Regarding claim 19: Rosenberg et al. teaches the basic material as set forth above. Not disclosed is that it is part of a wind vane. However, Motsinger et al. teaches a similar material on a wind vane, in that it measures wind currents (col. 1 lines 50-55). At the time of the invention a person having ordinary skill in the art would have found it obvious to combine the use of Motsinger et al. with the composition of Rosenberg et al. and would have been motivated to do so since a wind vane needs to be strong and weather resistant, as evidenced by Motsinger et al. (col. 4 lines 1-14).

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10-17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 7, 12-17 of copending Application No. 10/572,784. Although the conflicting claims are not identical, they are not patentably distinct from each other because in claim 7 the copending application claims a process comprising mixing a two component composition comprising a high molecular weight polyol, a low molecular weight polyol, an aromatic amine and a polyisocyanate, at least partially curing, and bringing into contact with a synthetic resin comprising an epoxy or vinyl ester resin as in claim 17 of the instant application. The ranges claimed substantially overlap with the instantly claimed ranges. Further, copending claim 12 substantially overlaps the amount claimed in instant claim 10, copending claim 13 substantially overlaps the amount claimed in instant claim 11, copending claim 14 substantially overlaps the hydroxyl group concentration claimed in instant claim 12, copending claim 15 substantially overlaps the low molecular weight polyol as in instant claim 13, copending claim 16 substantially overlaps the higher molecular weight polyol claimed in instant claim 14, and copending claim 17 substantially overlaps the amount claimed in instant claim 16.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Response to Arguments***

Applicant's arguments filed January 29, 2009 have been fully considered but they are not persuasive, because:

A) Applicant's argument that the instant claims require an order of mixing which is not taught by Rosenberg et al. is not persuasive. Rosenberg et al. teaches a two component composition in that a curable polymer and a curing agent are present (abstract). The composition is mixed (col. 6 lines 63-65). The claimed components are present as set forth in the rejection above. The language of the instant claims does not specify an order of mixing the components, but merely that the composition contains the components. Therefore, order of mixing is not a limitation to the claims in the language presently used.

B) Applicant's argument that, when mixed in the order disclosed in Rosenberg et al., the present invention is not produced is not persuasive. No factual evidence of this is supplied or found in the specification as originally filed. Only allegations that the order of mixing produces different results are found in the remarks. Arguments does not replace evidence where evidence is necessary (see MPEP 2145 I). While it is alleged in the remarks that a reaction did not occur between the amine free prepolymers and the aromatic amine, factual evidence is found in Rosenberg et al. to the contrary (examples 1-6, disclosure).

C) Applicant's argument that Rosenberg et al. do not teach properties of the composition is not persuasive since the properties are not claimed.

D) In response to applicant's argument that Rosenberg et al. is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Rosenberg et al. is analogous art because the document is concerned with the same field of endeavor, namely polyurethane compositions cured with aromatic amines. Further, a person having ordinary skill in the art would recognize that just because a castable polyurethane is disclosed, this is analogous art to the instant application since castable is another word for moldable as in paragraph 3 of the specification.

E) Applicant's argument that Sondhe et al. do not teach the aromatic amines is not persuasive. Rosenberg et al. teaches the aromatic amines. Sondhe et al. is relied on for the epoxy resin layer, not the teaching for the aromatic amine.

F) Applicant's argument that Motsinger et al. do not teach a wind vane of a wind power plant is not persuasive. A wind vane is a broad term for a structure that moves with the wind and is not required to be on a wind power plant. The requirement that the wind vane be on a wind power plant is not claimed and is considered intended use. Motsinger et al. teaches a similar composition on a wind vane. Therefore, it is germane what the requirements are for a wind vane for a wind power plant.

***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megan McCulley whose telephone number is (571)270-3292. The examiner can normally be reached on Monday - Friday 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James J. Seidleck/  
Supervisory Patent Examiner, Art Unit 1796

/M. M./  
Examiner, Art Unit 1796